

CLAIMS:

1. A go no-go gauge for verifying whether a process kit part used within a plasma chamber of a plasma processing tool has accumulated excessive wear or deposits, comprising:

5 a main body configured to be grasped by a user of the go no-go gauge;

a verifying feature configured to verify whether a dimension of a feature of the process kit part violates a prescribed size tolerance, wherein a violation of the prescribed tolerance indicates excessive wear of the process kit part or excessive material deposits on the process kit part; and

10 an identification feature configured to uniquely associate the go no-go gauge with at least one of said process kit part and a process to which the process will be exposed.

2. The go no-go gauge of Claim 1, wherein the main body comprises at least one of Teflon, plastic, metal, and a composite material.

15 3. The go no-go gauge of Claim 1, further comprising a company identification mark visibly provided on a surface of the go no-go gauge.

20 4. The go no-go gauge of Claim 1, further comprising a tool configured to perform a simple function other than said verifying whether a dimension of a feature of the process kit part violates a prescribed size tolerance.

25 5. The go no-go gauge of Claim 4, wherein said tool comprises at least one of a screwdriver, a measuring scale and a letter opener.

6. The go no-go gauge of Claim 1, wherein said verifying feature comprises a plurality of verifying features each configured to verify whether a dimension of a feature of the process kit part violates a prescribed size tolerance.

30 7. The go no-go of Claim 1, wherein the verifying feature comprises a protrusion for verifying that the dimension exceeds the prescribed size tolerance.

8. The go no-go of Claim 1, wherein the verifying feature comprises a protrusion for verifying that the dimension is smaller than the prescribed size tolerance.

9. The go no-go of Claim 1, wherein the verifying feature comprises a cavity for verifying that the dimension exceeds the prescribed size tolerance.

10. The go no-go of Claim 1, wherein the verifying feature comprises a cavity for verifying that the dimension is smaller than the prescribed size tolerance.

11. The go no-go gauge of Claim 1, wherein the identification feature comprises a unique configuration of said verification feature that is specific to said process kit part.

12. The go no-go gauge of Claim 1, wherein the identification feature comprises a unique marking that specifies at least one of said process kit part, a feature of the process kit part and a process to which the process kit part will be exposed.

13. The go no-go gauge of Claim 12, wherein said unique marking comprises at least one of a color and a symbol associated with said at least one of said process kit part, said feature of the process kit part and said process.

14. A method for verifying whether a process kit part used within a plasma chamber of a plasma processing tool has accumulated excessive wear or deposits, comprising:

determining a go no-go gauge associated with said process kit part, the go no-go gauge having a verification feature configured to verify whether a dimension of a process kit part feature violates a prescribed size tolerance, wherein a violation indicates the process kit part has accumulated excessive deposits of material or experienced excessive wear; and

applying the verification feature to the process kit part in a prescribed manner to verify whether the violation has occurred.

15. The method of Claim 14, wherein said determining comprises determining a go no-go gauge associated with said process kit part based on an identification feature provided on said go no-go gauge.

16. The method of Claim 15, wherein said determining comprises determining a go no-go gauge associated with the process kit part based on at least one of a symbol, a color, and a word provided on said go no-go gauge.

5           17. The method of Claim 14, wherein said determining comprises determining a go no-go gauge associated with said process kit part based on information not provided on said go no-go gauge.

10           18. The method of Claim 14, wherein said applying comprises applying the verification feature to the process kit part while the process kit part is mounted within a semiconductor processing chamber.

15           19. The method of Claim 14, wherein said applying comprises applying said verifying feature to the process kit part after said process kit part is removed from a semiconductor processing chamber.

          20. The method of Claim 14, further comprising determining whether to clean or replace said process kit part based on said applying step.

20           21. The method of Claim 14, further comprising using said go no-go gauge to perform a simple function other than said verifying function.

25           22. The method of Claim 21, wherein said simple function is at least one of screwing a screw and measuring a dimension other than said dimension of a feature of the process kit part.

          23. The method of Claim 14, wherein said applying comprises verifying that a dimension of the process kit part is smaller than a prescribed size tolerance.

30           24. The method of Claim 14, wherein said verifying comprises verifying that a dimension of the process kit part exceeds the prescribed size tolerance.

25. A go no-gauge for verifying whether a process kit part used within a plasma chamber of a plasma processing tool has accumulated excessive wear or deposits, comprising:

a means for verifying whether a dimension of a feature of the process kit part violates a prescribed size tolerance, wherein a violation of the prescribed tolerance indicates excessive wear of the process kit part or excessive material deposits on the process kit part; and

means for uniquely associating the go no-go gauge with at least one of said process kit part, a feature of said process kit part, and a process to which the process kit part will be exposed.